

AIRSpeed

Internet Brief
27 Jan, 2004



Why do we need

AIRSpeed ?

- CNO has directed a new Fleet Readiness Program (FRP) to support fleet operations in the Global War on Terrorism
- Naval Aviation will have to support current levels of readiness despite a \$1.5B budget shortfall.
- \$300M shortfall in FY-05
- 10% percent growth in the FHP
- Navy and Marine Corps unit commanders will fight in a cost-wise readiness environment.



Why do we need

AIRSpeed ?

- To date we have achieved great readiness....at great cost. Now we need great readiness at a lowest cost.
- We have not made significant changes in the way we manage repairs across all levels of maintenance
- We have new tools to use, but also a rich culture that will not “get it” without leadership involvement.



Quotes from the U.S. Marine Corps

- "...the *AIRSpeed* vision...fits our Marine Corps ethos of innovation and warfighting excellence."
- "...Marine Aviation intends to leverage the *AIRSpeed* philosophy in shaping our future approach to warfighting."
- "...as we refine the vision of MALSP II, I can tell you that *AIRSpeed* will be a central element."
- "*AIRSpeed* requires seamless integration of Theory of Constraints (TOC), Lean and Six Sigma concepts within a TOC architecture."
- "Again, we in Marine Aviation are excited about the *AIRSpeed* venture. We fully support it and, in doing so, are forging ahead to meet our Nation's future conflicts."



What's Next?

- We need a process for capitalizing on best practices and integrating lessons learned across the Naval Aviation Enterprise.
- NAVRIIP has provided us with the framework to implement process improvements such as TOC, Lean, and Six Sigma, that will provide us with a means to resolve barriers.



AIRSpeed Vision

“AIRSpeed enables World Class Logistics Excellence for the Naval Aviation Enterprise in support of TMS teams. It is characterized by an integrated culture of self-sustaining, continuous process improvement aligned toward delivering mission requirements at reduced resource cost.”



AIRSpeed Strategic Plan

- Strategic plan being developed that includes, as a minimum:
 - ✓ Planning
 - ✓ Training
 - ✓ Integration
 - ✓ Sustainment
 - ✓ Monitoring
 - ✓ Rollout
 - ✓ Assessment and metrics
 - ✓ Communication
 - ✓ Program Management
 - Budget
 - Staffing



Fundamental Principles

- ✓ Properly manage RFT/O (mission)
- ✓ Manage Inventory/investment (parts, equipment and facilities, APN)
- ✓ Reduce Operating Expenses (O&M,N, MPN)
- ✓ Identify and address interdependencies
- ✓ Identify and manage constraints
- ✓ Manage and reduce variability
- ✓ Create a Culture of Continuous Process Improvement (CPI)
- ✓ Revolutionize the way we do business

“Local decisions must be aligned to the global mission”



AIRSpeed Is NOT...

- A replacement for NAVRIIP
- About eliminating existing tools (i.e., dCT, cockpit charts and BRTs)
- Three independent initiatives (TOC, Lean, Six Sigma) under one name
- About subsuming existing improvement initiatives
- A “hardware” or “software” solution
- A plus up in inventory and support equipment to eliminate holes on the Supply Officer’s shelf



What is AIRSpeed ?

- It is NAVRIIP's enabler
- It is an enterprise approach to achieving and sustaining "cost-wise aircraft readiness"
 - ✓ It balances and aligns Maintenance and Supply activities to end- user demand (Operations)
 - ✓ It is the "Right material to the right place at the right time, at the right cost"
- Synergizes a set of tools to achieve cost-wise readiness using TOC as the foundation
 - ✓ Assessing where we should apply them & where we shouldn't apply them in an environment of continuous process improvement
- It drives choices, decisions and actions that deliver predetermined outcomes within an enterprise construct
- It is Revolutionary – changes business rules, processes
- It is Evolutionary – challenges assumptions in existing models



Where are we today?

- Many local process improvement initiatives are on-going
 - ✓ NAVRIIP TMS Team BRTs
 - ✓ PMB, AFMB, CPMB
 - ✓ Lean, Six Sigma, TOC
- Efforts are not aligned and often compete
 - ✓ Operating in Stovepipes
 - ✓ Narrowly focused efforts
 - ✓ Local decisions are not globally aligned
- Push vs. Pull System
- TYCOMs, NAVAIR, ICP, USMC & OPNAV have aligned and are focused on attaining cost-wise readiness through an enterprise-wide solution



What are the AirSpeed Tools

?

- **Theory of Constraints** is based on the belief that any organization has at least one constraint and that any improvements on non-constraints may not yield as significant ROI as working on the constraint.
- **LEAN** focuses on the removal of waste-defined as anything not necessary (no value added) to produce the product or service.
- **Six Sigma** is based on the assumption that the outcome of the entire process will be improved by reducing the variation of multiple elements.



Current Independent Initiatives

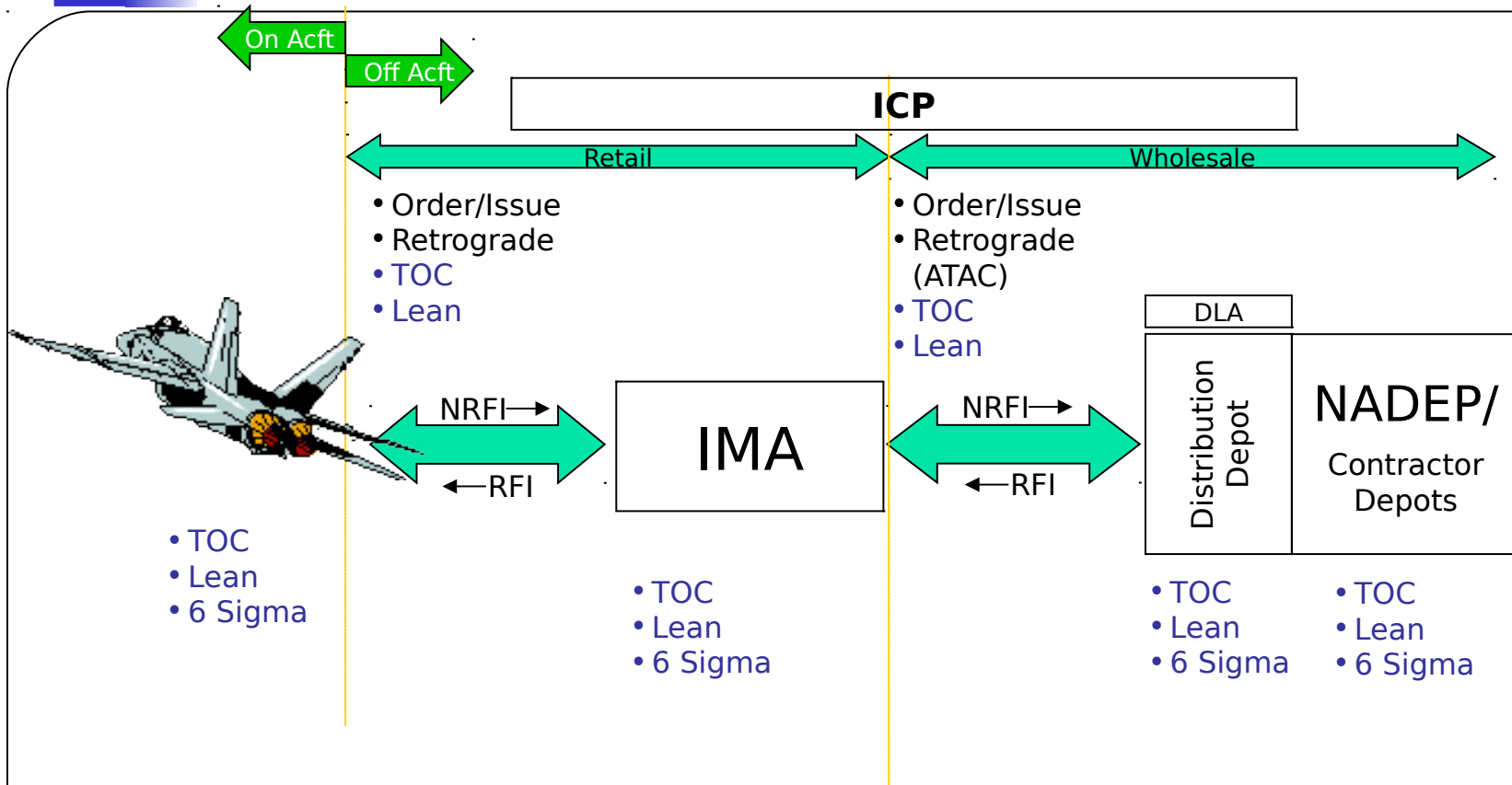
- **Basic TOC**
 - ✓ AIMD/ASD NAS North Island
 - ✓ AIMD/ASD NAS Pt. Mugu
 - ✓ MALS-26
 - ✓ MALS-29
 - ✓ AIMD/ASD NAS Whidbey Island
 - ✓ AIMD/ASD NAS Oceana
 - ✓ NADEP Cherry Point
- **TMS Team Gap Closure Efforts**
- **Lean**
 - ✓ AIMD Lemoore
 - ✓ AIMD Oceana
 - ✓ VFA-106 (phase shop)
 - ✓ MALS 11
 - ✓ MALS 31
 - ✓ NADEP Jax
 - ✓ NADEP North Island
 - ✓ AIMD Rota
- **Six Sigma**
 - ✓ AIMD Oceana
 - ✓ NADEP Jax



AIRSpeed Approach

- Transition from a “push” system to a “pull based” system
- Continuous Process Improvement
 - ✓ Continuous rightsizing our footprint
 - ✓ Continuous streamlining of ILS elements and processes
 - ✓ Intense focus on objective detractors
- Budgetary decisions made with comprehensive understanding of decision impact
- Achieved through a focus on applying the right management tools for removing/managing constraints, removing waste and reducing variability system wide

AIRSpeed Enterprise

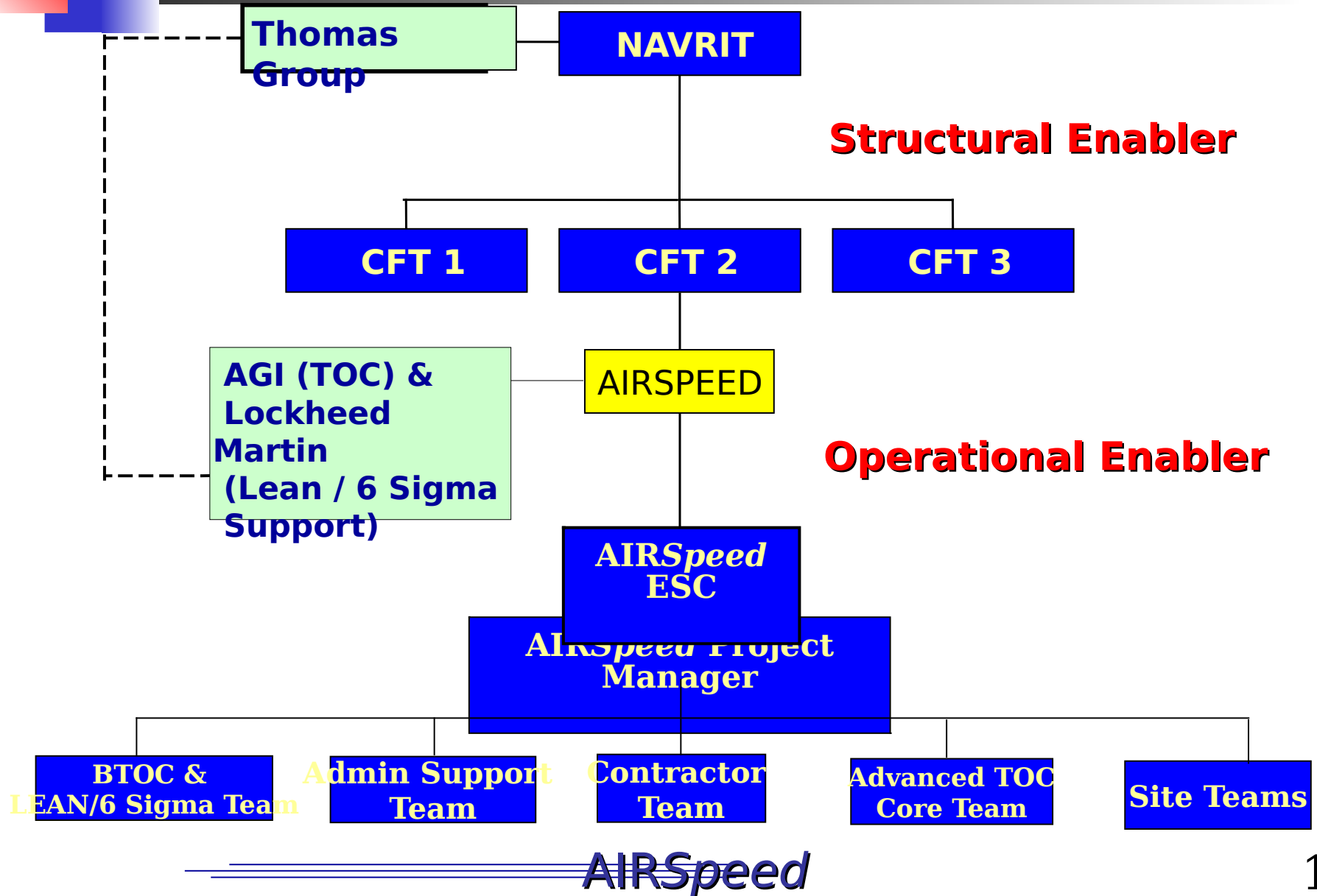


AIRSpeed

- Identifying and addressing interdependencies
- Managing and reducing variability
- Identifying and managing constraints
- Eliminating waste

AIRSpeed

Links to NAVRIIP



Airspeed Rollout Strategy



Rollout Assumptions

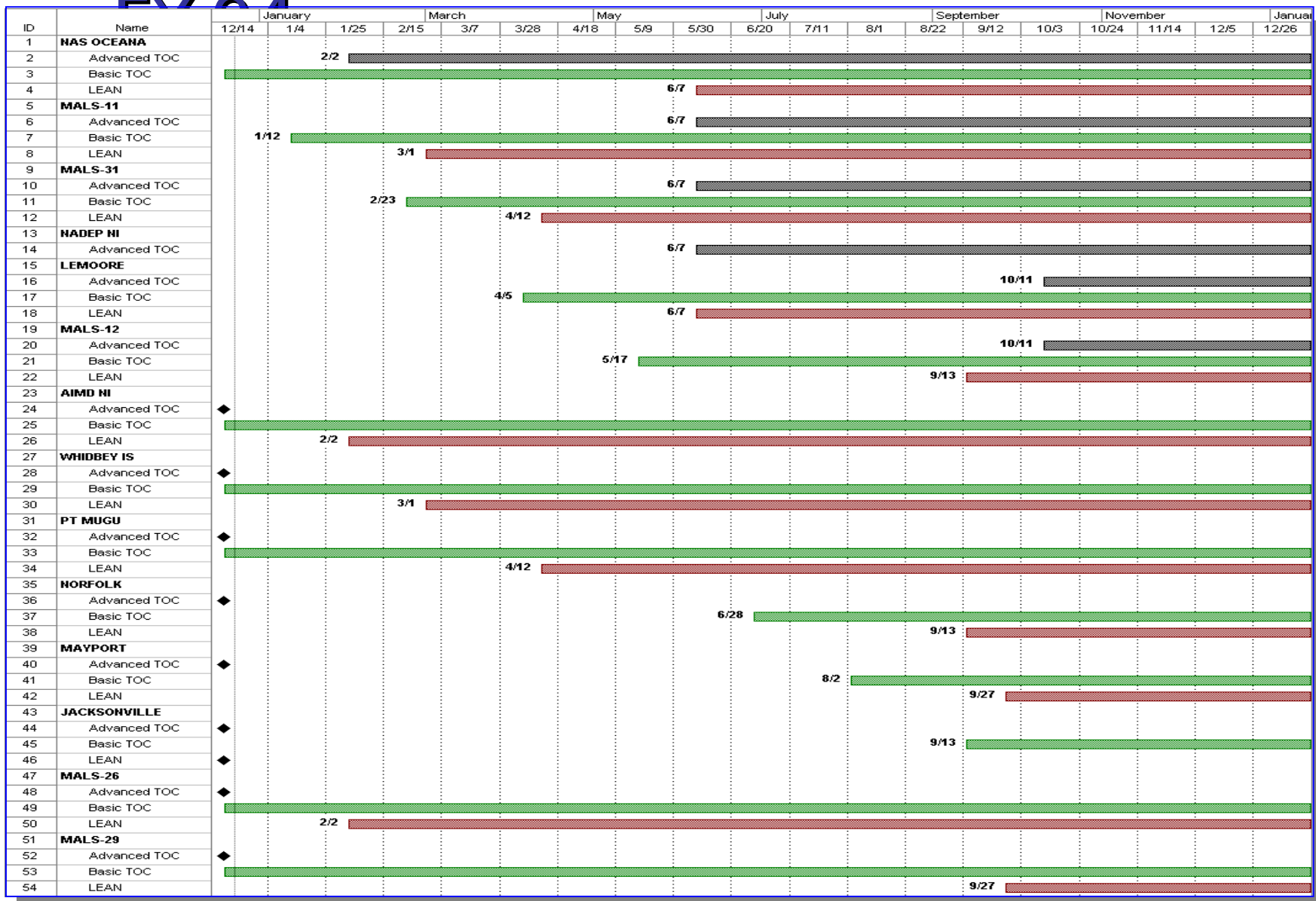
- Initially focused on Shore Based Activities
- Focus on Cost and RFT/O
- F/A-18 T/M/S first, followed by:
 - ✓ H-60
 - ✓ CH-53/CH-46
 - ✓ E-2C
- Ideally in this order:
 - ✓ Basic TOC (formerly known as RIFLe)
 - ✓ LEAN and Six Sigma
 - ✓ Advanced TOC



Site Deployment

- Phase 1
 - ✓ AIRSpeed Intro
 - ✓ Analysis / Assessment
- Phase 2
 - ✓ Strategy & Plan Development
- Phase 3
 - ✓ Deployment, Execution & Evaluation of Plan
 - ✓ Measure results
- Phase 4
 - ✓ Evaluation of expected outcomes
- Phase 5
 - ✓ Sustainment of CPI at site & enterprise level

 FVDA





Successful Outcomes

- Reduce Total Cost Of Naval Aviation
 - ✓ Reduce Inventory, Operating Expenses, and Manpower
- Support Fleet Readiness Plan
- Provide Ready For Training/Operations aircraft
- Improve Logistics/Maintenance Response
 - ✓ Decrease Cycle Time
- Place ownership and accountability at the appropriate levels

Airspeed Executive Leadership Training



ELT Training Classes

- Four day course
- Class Sizes about 36 people
- Target Audience:
 - ✓ CV/CVN CO's, CAG's, Commodores, and their logistics triad (AIMD Officer, Supply Officer, and Type Wing/CVW Maintenance Officer) and Program Managers
 - ✓ All MAG CO's and their respective MALS CO's
- Class Schedule Posted on AIRSpeed website
 - ✓ <https://logistics.navair.navy.mil/airspeed/index.cfm>



ELT Course Outline

Day	Tuesday 1	Wednesday 2	Thursday 3	Friday 4
0800 AM	INTRO	CUSTOMER	SIX SIGMA	Practical Application
	AFAST	TOC		AIRSpeed Summary
	AIRSpeed Intro			
PM 1700	AIRSpeed Architecture and TOC	LEAN	Practical Application	Wrap and Evaluation

Social Event

Social Event



AIRSpeed Take Away

- Revolutionary shift from “consumers of resources” to “managers of resources”
- Integrated O-I-D approach for cost-wise readiness utilizing proven best practices
- January Leadership Training
first step in institutionalizing AIRSpeed
- Rollout on track for February 04



Now, we step off...

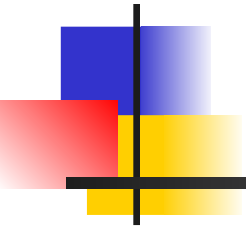
We will make a lasting and profound LOGISTICAL and CULTURAL change in the way we do business (Operations, Maintenance, and Supply) across the entire Naval Aviation Enterprise.

Leadership is KEY to the success of AIRSpeed and the viability of Naval Aviation for the future.



Touchstone

“AIRSpeed is NAVRIIP’s architecture for operationalizing Cost-Wise Readiness across the Naval Aviation Enterprise.”



AIRSpeed

Backup Slides



Executive Steering

Committee

- CNAP N42
- CNAL N42
- CNAP N422
- CNAL N422
- NAVICP
- HQMC/ASL
- OPNAV
- CNAP N41
- CNAL N41
- NAVAIR 3.0
- NAVAIR DEPOT
- DLA
- Advisors
 - ✓ AGI
 - ✓ Lockheed Martin
 - ✓ Thomas Group



Successes

- TOC at AIMD North Island
 - ✓ EXREP's decrease from 62 to 16
 - ✓ MULT EXREP's decrease from 14 to 1
 - ✓ Over-Aged AWP decrease from 2.49% to 0.25%
 - ✓ 1st Day Issue Effectiveness (NET) increase from 59% to 90%
 - ✓ ACWT (w/o MDU) decrease from 41.5 to 18.5 hours
 - ✓ ACWT (w/ MDU) further decrease to 1.5 hours



Successes

■ TOC at MALS 26

- ✓ Reduced number of Critical DIFM items by 50% in 1 Month
 - Critical DIFM decreased from 129 to 20
- ✓ Reduced NMCS off-station from 36 to 5
- ✓ Reduced average delivery time from 108 to 25 minutes
- ✓ Reduced Critical Repairable repair time from 9 days to 1 day
- ✓ Reduced the number of A/C with AKO and AK7 docs from 38 to 18



Successes

■ LEAN at AIMD Lemoore

- ✓ Reduced Engine TAT from 83 days to 12 days
- ✓ PRC/URT Repair time decreased from 90 minutes to 30 minutes
- ✓ Radar shop improved TAT from 14 days to 2 days
- ✓ SE improved Training and Licensing process from over 2 hours to less than 15 minutes
- ✓ Ordnance Division eliminated BRUs being turned in before 210 day inspection. (Quality built in)
- ✓ Paraloft - first division to add “defect” elimination to their processes
- ✓ “O” level FLIR pod team incorporated into the “I” level FLIR work center



Successes

- **LEAN at AIMD Oceana**

- ✓ Eliminated 30 BFWs and now have 22 spares for the F-404
- ✓ Decreased F-404 Rail usage from 18 to 6
- ✓ Reduced F-404 TAT from 78 to 27 days while maintaining a 15% increase in module builds
- ✓ Reduced F-18 hydraulic actuator cycle time by 47%
- ✓ BRU-32 inductions for unscheduled maintenance decreased from 80% to 40% due to much improved build quality



Successes

- **NADEP Cherry Point**

- ✓ **Spring 1999**

- AGI provided executive overview to NADEP leadership
 - In-depth training on Critical Chain planning, scheduling and buffer management to H-46 Strategic Business Unit

- ✓ **Objectives: ↓WIP, ↓TAT, ↓multi-tasking of critical resources, ↑Communication**

- ✓ **Results: WIP flow ↓46% from 26 to 12 on H-46E**

- ✓ **TAT ↓59% from 225 days to 132**



Successes

- **Lean Six Sigma at NADEP Jacksonville**

- ✓ **FY02 L6S Commencement**

- Partnering with General Electric and Pratt & Whitney to leverage current Industry Improvement Initiatives (Lean and Six Sigma)

- ✓ **Objectives: ↓WIP, ↓TAT, ↑ Process Cycle Efficiency, ↓Lead Time, ↑Throughput**

- ✓ **Results:**

- **TAT (Days)**

- ↓53% from 149 to 70 on F404 HPC & Fan
- ↓35% from 122 to 80 on F404 LPT
- ↓59% from 116 to 48 on F404 HPT

- **WIP (IPG1 Units)**

- ↓47% from 19 to 10 in Plasma Process
- ↓87% from 146 to 19 in Central Clean Process



Successes

■ NADEP North Island

Brake Cell	Before Lean Cell	After Lean Cell	Delta
TAT	75 Days	24 Days	-68%
Processing Distance	8730 ft	3800 ft	-50%
Shop Floor Space	3000 SqFt	300 Sq Ft	-90%
WIP	152 Units	29 Units	-81%
Previous Qtr Best	49 Units	78 Units	+59 %